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## **Contingent Approach to In-Firm Factors Affecting the Adoption of Recent Management Accounting Practices Decision: A Case Study on Selected Pharmaceutical Firms in Egypt”**

### **Abstract**

Recently, contemporary management accounting studies focus on management accounting techniques or procedures initiated in the industrialized countries, and whether they can be effectively adopted in developing countries. In addition, what are the factors (both impetus and impediment) that would affect the application of management accounting practices in developing countries? Several studies in different parts of the world have investigated the status of their national management accounting practices, such as the study of Chenhall and Smith (1998a) in Australia, Wijewardena and Zoyza (1999) in Japan, Drury et al (1993) in the U. K. Pavlatos and Odysseas (2009) in Greece. However, this area of research remains unsatisfactory and rare in relation to the literature of some developing countries such as Egypt. This research attempted to investigate the in-firm internal contingent factors to the adoption of recent management accounting practices. The focus of this study is the pharmaceutical industry in Egypt being the most advanced sector. A case study on three selected pharmaceutical firms in Egypt is conducted in an attempt to reveal the contingent relationship, as suggested by the literature review, between the independent variables chosen to be tested in this study,

and the dependent variable. Independent variables being: employee headcount, personnel competency, ownership type, computerization level, expected contribution to overall firm success, cost justification, implementation time, financial resources required. While the dependent variable is the decision to adopt any recent management accounting practices. The researcher choice of the methodology is guided by the problem at hand and the resources that can be brought and the data collection method used to best solve the problem. Based on the research problem identified and the nature of variables to be tested the data collection method chosen by the researcher is semi-structured interview. A qualitative analysis is then conducted through a detailed transcription of all interviews to extract the main theme of the research. The theme is then discussed separately. The results supported the relationship between employee headcount, personnel competency, computerization level, cost justification, expected contribution to overall firm success, and the ownership type on one hand and the decision to adopt recent management accounting practices in those firms on the other hand. In addition the relationship between financial resources needed and implementation time on one hand and the decision to adopt recent management accounting

practices on the other hand was not supported by the research results.

## Introduction

One important research area in contemporary management accounting is whether the management accounting practices initiated in the industrialized countries can be effectively adopted in developing countries, in other word what are the factors (both impetus and impediment) that would affect the application of management accounting practices in developing countries?

Several studies in different parts of the world have investigated the status of their national management accounting practices, such as the study of Chenhall and Smith (1998a) in Australia, Wijewardena and Zoysa (1999) in Japan, and Drury et al (1993) in the U.K. These studies have researched the adoption rate, benefits derived and future direction for traditional and advanced management accounting practices. However, this area of research remains unsatisfactory and rare in relation to the literature of some developing countries such as Egypt. Empirical evidence for successful adoption of management accounting in developing countries is still rare at present (Lin and Yu, 2002). Farouk (2005) provided some insights on the diffusion of management accounting practices, specially the recently developed ones, in the Egyptian manufacturing sector of which the pharmaceutical industry, but only few studies investigated what are the firms' factors and characteristics that enhance the adoption of recent practices in order to cope with the new environmental changes, and global competition (Fadaly,2008).

In addition, Egypt's pharmaceutical industry is considered relatively mature with moderate growth rates, as argued by Farouk (2005), that the pharmaceutical sector in Egypt is very successful and promising; she also proved that this sector is an advanced industry sector in Egypt. This conclusion encourages the researcher to consider the Egyptian pharmaceutical industry an appealing industry for this study which is interested in the adoption of recently developed management accounting practices in Egyptian manufacturing organizations. A study, that needs to be applied on an advanced industry sector in order to reach some meaningful results, in a developing country in its transitional phase of economy, like Egypt.

The in-firm factors chosen to be tested in this study are suggested by Fadaly (2008) for further research. This research is organized as follows: the next section presents the literature review, followed by the research methodology, then the analysis and discussion of the findings, and finally the conclusion.

## Literature Review

Walley et al (1994) studied the primary reasons for the adoption or non-adoption of new accounting methods. Although they were convinced that external environment was an important influence in such an issue, they also revealed in their study that it is interesting to note that most changes have resulted from some forms of external pressure, but most of reasons for non-adoption appear to come from internal or organizational sources.

Chenhall and Langfield-Smith (1998) surveyed the extent to which Australian manufacturing firms have adopt-

ed certain traditional and recently developed management accounting practices and emphasized the benefits received from those practices. Newer techniques were more widely adopted than found in prior surveys. But, overall, the rates of adoption of traditional management accounting practices were higher than recently developed techniques. Also they suggested future research to gain a better understanding of the factors that influence differences in the levels of adoption of recently developed management accounting techniques between countries.

Anderson and Lanen (1999) studied the case of India after the liberalization of the Indian economy 1991 using a contingency theory framework. The study provided evidence of changes in management accounting practices associated with shifts in the external environment.

Lin and Yu (2002) cast light on effective diffusion of management accounting practices under different social and economic systems by studying the case of Han Dan Iron and Steel Company in the People's Republic of China. The Han Dan experience demonstrates that management accounting can play a very important part in business management in China or other developing countries.

A study was conducted by Haldma and Laats (2002) in Estonia; they found some evidence that changes in cost and management accounting practices are associated with shifts in the business and accounting environment as external contingencies, and with those of technology and organizational aspects as internal contingencies.

In addition to other studies conducted in the developing countries, such as Kattan, Pike and Tayles (2007), in Palestine; which aimed to understand the changes in management accounting and control systems (MACS) employed over a period of time and identify changes in these systems as a result of political changes in the surrounding environment. It was apparent that these changes were not much influenced by external environmental uncertainty, on the contrary, affected by internal factors such as; growth in sales and profits, the level of education of both the manager and employees of the accounting department, the ISO certification acquisition, the expansion of operations and the availability of computers. This research extends the contingency theory framework to management accounting practices in less-developed economies. In addition to McLellan and Moustafa (2011) Their study focused on the use of Management Accounting tools by companies in the Arabic Gulf Cooperation Council (GCC) countries.

## **Methodology**

The present study is based on the case study research approach, with "semi-structured-in-depth interviews" as the main method of data collection. Qualitative researchers are usually criticized that their research is too subjective, or the number of cases in study is too small. On the other hand, qualitative analysis results in more meaningful and in depth results and conclusions when technical information is needed; specially in a country like Egypt that lacks the basic research infrastructure the response rate to a questionnaire would be very low, and the data collected through one-to-one interviews would be

more reliable and ensure the absence of any misunderstanding. Data was collected in 2011 by personal interviews with Chief Financial Officers of each of the three companies included in the study.

A list of 41 management accounting practices (Chenhall and Langfield-Smith, 1998) is used to determine the level of adoption of each of the firms under study to recent management accounting practices, being the dependent variable. Moreover, the semi-structured interview was designed in a way that ensures the collection of all needed information regarding the independent variables suggested by this study to have an effect the dependent variable.

Pharmaceutical companies in Egypt fall into three categories: public sector companies that are subsidiaries of the Holding Company for Pharmaceuticals, private sector companies, and multinational companies. Most multinationals are active on the Egyptian market. Not all, however, have a direct manufacturing presence, with many importing drugs or licensing production to local manufacturers. Multinational companies supply about 65% of the market through direct local manufacturing or through licensing agreements. Based on this categorization the 3 firms were selected for the purpose of this study; 1 of the biggest public sector companies, 1 of the local privately owned companies, and 1 multinational company.

Lately, at the transcription phase of the interviews, the researcher noticed that the multi-sectional data collected can be categorized into 1 main theme, in a way that can allow for the further qualitative analysis. This was found to be of more sense to the researcher and

helped establish a better focus on the areas of interest that better address the problem of the study, thus, cover the major areas and facilitate grouping of the feedback generated from the interviewees.

The theme is; The Accounting Practices Adoption Decision. This theme serves the study by addressing the different accounting practices in use by those firms in an attempt to develop a better understanding of the firms' contingent factors to the adoption of such practices.

## Results and Discussion

The points of focus of the theme are detailed in the table shown in the following section where columns represent the firm. The rows of the table represent the focus point.

### Theme's focus points:

1. What are the practices adopted by the firm as of the list?
2. Does the availability of financial resources affect the decision of adopting recently developed practices?
3. Is the accounting system computerized?
4. Does computerization affect the decision?
5. Does implementation time affect the decision?
6. Is cost-benefit analysis considered in the analysis?
7. Does personnel competency affect the decision?
8. Is the employee headcount a factor to be considered when the decision is taken?

It is important to mention here that the data summarized in the following table doesn't represent a direct answer from each respondent to the questions,

but a summary or conclusions made by the researcher, after revising the inter views’ transcriptions and extracting the answers to those points of focus.

	<b>Multinational company</b>	<b>Public sector company</b>	<b>Local private company</b>
1	29 practices out of the 41 are adopted	17 practices out of the 41 are adopted	26 practices out of the 41 are adopted
2	No, the finance is not a relevant factor	Finance is sometimes a problem, if a practice implementation would require huge investment it will be a problem as the holding company doesn't always provide needed finance, but still it is not an effective factor this problem is usually resolved	Finance is an important factor but doesn't represent a real obstacle as we can get the finance, if needed, from many sources with the assets enough for any loan collateral
3	Computerized using (AS400) in the process of moving to SAP	No computerization manual accounting system still in use. Although the holding company started to computerize the system in an attempt to exercise control over all subsidiaries but still nothing accomplished	Computerized using a local imitation of SAP which is DMS for being much less expensive
4	Of course most of the new practices cannot be implemented in the absence of a computerized system as they are implemented through software packages	Of course most of the new practices cannot be implemented in the absence of a computerized system as they are implemented through software packages	Of course most of the new practices cannot be implemented in the absence of a computerized system as they are implemented through software packages
5	No, whatever time it takes doesn't matter as the traditional practices are always used in parallel until we are ready to switch, meaning the system is ready and personnel are familiar with it.	No, whatever time it takes doesn't matter as the traditional practices are always used in parallel until we are ready to switch, meaning the system is ready and personnel are familiar with it.	No, whatever time it takes doesn't matter as the traditional practices are always used in parallel until we are ready to switch, meaning the system is ready and personnel are familiar with it.
6	It is not just a comparison between the cost (the finance) and the expected benefits but also the expected value or benefits to be added as opposed to the traditional techniques followed. In order to justify the finance required.	Of course no extra cost can be incurred without a cost-benefit analysis to show that finance is justified with the expected benefits that would contribute to the overall firm success.	Of course no extra cost can be incurred without a cost-benefit analysis to show that finance is justified with the expected benefits that would contribute to the overall firm success.
7	Of course the qualifications of the personnel is very important to be able to switch to new trends and techniques, specially that training is expensive and still requires a certain level of qualified personnel with specific educational levels.	Of course the qualifications of the personnel is very important to be able to switch to new trends and techniques, specially that training is expensive and still requires a certain level of qualified personnel with specific educational levels, and this quality is not always available as they go for higher salaries offered by private and multinational firms	Of course the qualifications of the personnel is very important to be able to switch to new trends and techniques, specially that training is expensive and still requires a certain level of qualified personnel with specific educational levels.
8	Yes as the more recent practices applied, the more computerization, and the less need for employees, so more headcount means unneeded extra expenses	Yes as the more recent practices applied, the more computerization, and the less need for employees, and to lay off employees is hard according to the holding company's policy.	Yes as the more recent practices applied, the more computerization, and the less need for employees, so more headcount means unneeded extra expenses

## Discussion

Through the thorough theme analysis it can be concluded that the public sector company is the least in adopting recently developed practices, followed by the privately owned company and on top the multinational company. So it can be concluded that the ownership type does affect the decision to adopt more recently developed management accounting practices. In addition to the effect of the employee headcount on the decision since it was clear from the responses that headcount would affect negatively the adoption of new practices. Another evidence is the case of the public sector company; largest employees' headcount and lowest adoption rate.

Financial resources required did not prove to represent an obstacle to the adoption of recent practices although sometimes hard to acquire but respondents ensured it cannot be an effective variable.

Theme analysis confirmed that Computerization level is considered a contingent factor to the adoption of recent practices. Obviously, the public sector company is the least in adopting recent management accounting techniques and also the least in the computerization level of its accounting system.

Implementation time did not prove to be a contingent factor to the decision of adopting new techniques, as the introduction of a new practice is always gradual and in parallel with the existing system until it is totally ready and can totally substitute the old one. Therefore, the operation does not suffer from any delay during the implementation of any new technique.

Both cost justification and expected contribution to overall firm success were proved to be contingent factors to the adoption decision. Nevertheless the expected contribution to overall firm success is considered the justification to the cost to be incurred.

Employees' competency also proved to be a contingent factor to the adoption of recent practices.

## Conclusion

It can be concluded that employee headcount, personnel competency, computerization level, cost justification, expected contribution to overall firm success, and the ownership type can all be considered contingent factors to the adoption decision of recent management accounting practices in the firms under study. In addition financial resources needed and implementation time did not prove to be contingent factors to the decision to adopt recent management accounting practices according to the research sample results.

In interpreting the results of this study, certain limitations should be acknowledged. Due to the small sample size, the generalization of the results should be viewed with caution. They should rather be seen as a basis for a future large-scale survey that aims at the validation and expansion of the findings.

In terms of future research, there is a need to study the in-firm factors effect on the adoption of recent management accounting practices on a large-scale; including more companies in the same industry, other industries, and other suggested variables.

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